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ABSTRACT

A number of forces are likely to contribute to future issues in educational assessment: (1) reduction in government resources, (2) financial pressures broadening the diversity of post-secondary applicant pools; (3) adult student emergence at the post secondary level; (4) concern with accountability of schools and educators; (5) strengthening of the relationship between education and work; and (6) capability and availability of technology in education. A discussion of these six factors and how they relate to students, educators and the public (those involved with educational assessment) is presented. Students of all ages repeatedly indicate high interest in educational and vocational decision help. Schools will continue to face the "standards" issue. The concern of standards regarding student performance will also be apparent through public scrutiny of schools and cause an increase in educational accountability. Emphasis on educational standards may result in the effective use of extant measurement tools through the integration of these measures into the instructional process. The concern of the public for educational quality has resulted in the growth of "minimum competency" testing for students and the adoption by many states of stringent standards for teacher educational programs. (Author/PN)

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ISSUES IN THE NEXT DECADE OF SECONDARY AND POSTSECONDARY EDUCATIONAL ASSESSMENT[1]

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American College Testing Program

What issues pertinent to secondary and postsecondary educational testing or, viewed more broadly, educational assessment are likely to predominate in the next decade? And, how will these issues be resolved?

Being a mere mortal, and one not particularly adept at predictions of any kind (e.g., for me to designate any team a favorite in an athletic contest is the kiss of death), my responses will be tenuous, at best. To temper the effect of this personal flaw, I shall rely heavily on the recent history of issues involving educational assessment in making my predictions. In that regard, I am inclined to think not only is it he who forgets history, but he who remembers it, who is destined to repeat it.

After years of being immersed in data suggesting an eternal relationship between past and future activity/performance in all manner of human endeavor, I believe that nearly all of the issues confronting education and educational assessment today are deeply rooted in our past and will, even as the proverbial "poor" of the Scriptures, remain with us always. Ever creative and optimistic, however, we will continue to find new ways of defining and seeking resolution of these issues.

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[1]Remarks presented at the Annual Meeting of the American Educational Research Association, New York, March 1982, as part of a symposium entitled: "Future Directions for Mental Measurement."

What then, are these issues that will continue to perplex and challenge the architects and practitioners of educational assessment? At the risk of oversimplification, I would classify them as being of two kinds: (1) those that relate to the role of assessments in facilitating the rationing of educational/vocational opportunities and (2) those that involve the use of assessments in abetting human development. It is the first of these uses that evokes the most controversy. Value-laden questions, most focusing on matters of equity in selection, abound. It is just such questions that have fueled the so-called "truth-in-testing" legislation of recent years.

On the face of it, the use of tests as a tool in advancing human development should not be highly controversial. However, tests used in this manner are inevitably embroiled in issues of the quality of educational programs and of those who deliver those programs. Witness the relentless reliance on test scores by the public and the news media as the primary indicator of quality in the schools.

Given the complexity of the myriad issues encompassed by these two categories of test use, it is nigh impossible to give thorough treatment to them in this brief presentation. Conceding this, I have instead elected to approach my task by describing just a few of the issues and problems that will represent continuing challenges and opportunities for educational testing over the next decade.

As a point of departure, I will identify a number of the forces or pressure points that will create or sustain many of the secondary and postsecondary educational issues of the next decade. It is these forces that will, in turn, shape the demands on, and challenges for, educational assessment. I will then try to relate these forces to various issues in educational assessment from the vantage points of the parties most involved: students, educators, and the public.

Forces Contributing to Future Issues in Educational Assessment

A number of forces, or pressure points, are likely to contribute to future issues in assessment in secondary and postsecondary education. Most of these forces are external to the educational enterprise; that is, they will be thrust upon educators whether the former are ready for them or not. Others will emerge from within the education profession as new and improved procedures are developed for educational instruction and assessment. Many of these forces have already revealed themselves; some will become more evident in the years ahead. Some of these forces, and my projections about their implications for educational assessment in the future, are listed below:

Force #1: A substantial reduction, relative to times past, in the level of resources committed by government to education (e.g., entitlement programs and student aid), all at a time of enrollment declines in both secondary and postsecondary education.

This force will translate to increasing financial pressures on post-secondary institutions. Various types of institutions are likely to respond to these pressures in different ways. Some institutions, particularly small private colleges affected by declining enrollments, will be concerned less with the gate-keeping functions of testing/assessment and more with its diagnostic and prescriptive capabilities. Other institutions, especially the large public colleges and universities (and possibly some two-year colleges) may experience anew the need for test/assessment data for selection decisions as increasing numbers of students find the lower tuitions of such institutions more palatable in an era of reduced financial aid.

Force #2: Continued, and possibly growing, diversity in the characteristics of enrolled students, particularly at the postsecondary level, as many colleges become driven by financial pressures and elect to broaden their applicant pools in order to sustain enrollments.

This force will also lead to greater emphasis on diagnostic/placement testing by postsecondary institutions, as they are faced with the challenges of serving enrolled students not fully capable of college level work, and with retaining these students without completely compromising or sacrificing educational standards. Secondary institutions are likely to get their share of pressure too, as it becomes even more apparent that many high school graduates are ill-prepared for college. In both cases, the need for usable information that can abet student development will continue, and possibly grow stronger.

Force #3: The continued emergence, at the postsecondary level, of the so-called adult student (i.e., older individuals in the community who are either entering college for the first time, or returning for retraining or skill updating).

There is already a growing acceptance of such students by postsecondary institutions. This acceptance will blossom as colleges learn how to relate better to these students. Educational assessment can play an important role in the interface of the college with the adult student by helping the student to explore educational and career options and placing him/her accurately within the school's curriculum.

Traditional tests and assessment batteries, though not without value for adults, are sometimes not especially well suited for use with them. A future challenge will be to develop better assessment tools for use with this audience. Particular emphasis will need to be given to measures and/or procedures for evaluating and crediting learning acquired outside the schools.

Force #4: Continued, and possibly more focused, concern with accountability for schools and educators.

Confidence in our educational institutions has waned. The erosion of the public's confidence in recent years has been evident in questions about the priorities assigned by the schools to various instructional objectives and to the quality of the educational process itself. Educational tests have effectively revealed and highlighted these problems but have offered precious few insights on how to solve them. As a result, greater effort will be given in the future to more effective ways of linking instruction and testing. Another result, particularly at the postsecondary level, will be increased interest in "outcome" measures; that is, indicators that the schools have succeeded in causing/facilitating intended learning.

Force #5: Increased emphasis on strengthening the relationship between education and work.

Today's students are increasingly concerned with whether their education, both secondary and postsecondary, is preparing them

adequately for life after school. This concern coincides with the continued growth in educational/training programs provided by business and industry. There is already a growing awareness that students and their parents want evidence of the relevance and adequacy of the school/college curricula and the quality of instructional programs. (This concern is likely to grow even stronger in a period of high unemployment.) Educational assessment can at least play a role in meeting this concern. And, I predict significant growth in testing in educational programs sponsored directly by business and industry.

Force #6: Expanded technological capability and increased availability of it for use in education.

Recently advanced technologies will soon be widely used by schools, indeed, even by individuals in their own homes. This offers some exciting prospects for those of us engaged in educational assessment, both as developers and as users. The new capability for more elaborate and relevant modes of assessment (adaptive testing, item-types involving simulations, etc.), as well as instruction, promise substantive improvements in the linkage between testing and instruction, and thus enhanced learning environments. These new technologies and procedures will stretch thin existing measurement theories and methodologies.

Illustration of Issues Specific to Various Educational Assessment Audiences

As noted, the forces described above are likely to affect educational assessment practices during the next decade in important ways. Indeed, each force suggests different but sometimes complementary consequences and concerns for each of the several parties involved in educational assessment. Three such parties are considered here: students and their parents; educators, including teachers and administrators; and the public, including legislators.

Students

As it concerns students' needs and wants, there are at least two ways of determining the direction that educational measurement might, or ought, to take in the years immediately ahead. As "professional educators" we can speculate about those areas of educational assessment that are important to, or for, students. Or, we can go directly to the students for some insights.

There is little doubt that a matter which weighs heavily on the minds of most students, be they of high school or college age, has to do with "life after school." In high school, students' concerns turn to whether or not they should pursue further education or go directly into the work force. If they choose the former, their concerns turn to choice of educational major and ultimately, to choice of vocation. If they opt for no college, their concerns focus on options in the world of work. In both cases, they face the prospect of professional and/or vocational training for an employment market that is constantly in a state of flux.

In view of this concern of students (and their parents) for the future, it is not surprising that when asked about the various forms of

special assistance they will need upon entrance to college, the students repeatedly indicate high interest in help with making educational and vocational decisions. The data in Table 1, which generalize to the responses of about one million students who complete the Student Profile Section of the ACT Assessment Program each year, bear out this concern. Almost half of the responding students indicate a need for assistance with educational and career planning. Nor is this concern limited to students contemplating college.

A study done by ACT in the early 1970s involving a nationally representative group of students in over 200 junior and senior high schools throughout the U.S. affirmed high school students' desire for help with educational and vocational planning. It also revealed that students of junior high school age are already beginning to think about vocational choices and thus are desirous of assistance with exploration of the options available to them. At both levels, the students felt that they had not received adequate help from the schools.

This very same need exists for "older" students contemplating a career change or a return to college. A major unfulfilled need for such students, and prospective students, is their reconciliation with a new environment and the choices and opportunities that it affords. At present, much of secondary and postsecondary education is not addressing effectively this need for educational and career planning by students of all ages.

Some persons may, and do, argue that educational and career planning are not appropriate roles for the schools. However, not only do I believe that they are appropriate roles, I believe they represent two of the most important functions of the schools. Someone has thoughtfully observed of himself, when contemplating the path to his own career, "By what right did <u>that</u> impetuous, immature, uninformed young boy of 17 or 18 determine the

entire course of my life?" It seems to me that aiding students with education and career planning is a most appropriate and important role of the schools. Indeed, it is almost a truism that schools should invest time and energy in helping students to make informed decisions about how they will use the knowledge and skills which the schools have helped them to develop.

Because of the growing diversity of student backgrounds, because of increasing concern by students with the "payoff" of their education, because too many individuals enter the world of work or postsecondary education based on impulsive, ill-considered choices, and because there seems to be inadequate linkage between national projections of work-force needs in the next decade relative to the educational plans of today's high school seniors, I believe that a major role for educational assessment in the next decade will be, or at least ought to be, associated with the educational and career
planning and counseling functions of the schools.

Specifically, I believe that the schools need to and will be giving increased attention to measuring students' developed abilities and the strength of their interests and experiences, and then using these measures to design interventions aimed at facilitating meaningful educational and career exploration by the students. These same data, obtained early enough, will also be used to help students prepare themselves better for college and/or entry into the work force.

Educators

What are some of the assessment-related issues that teachers and administrators, in particular, will have to attend to in the next decade? First, I believe that the schools will continue to face the "standards"

issue. As more students of diverse, and often inadequate academic backgrounds enter college (a direct result of lowered standards by some colleges seeking to maintain current enrollment levels in a period of declining numbers of secondary school graduates), new resources will have to be directed, or old resources redirected, to remedial instruction aimed at providing students with the requisite skills for success in higher education. This will likely result in further pressures on the secondary schools to adopt and adhere to meaningful standards of student performance.

The phenomena described above, if they occur, will intersect with the increasing emphasis on the tightening relationship between education and work. Saleable "basic" skills will continue to be emphasized by the schools; at the same time business and industry are likely to continue their already awesome expansion into education/training programs, some of which duplicate existing school functions.

The concern for standards will also be apparent through public scrutiny of the schools. School boards, citizen groups, and legislatures will continue to pressure schools in directions that translate into increased accountability. Greater emphasis on educational standards and outcomes may also be apparent in the accrediting activities of education, where a concern for the quality of the products of the educational process looms ever larger.

At the postsecondary level, pressures for maintaining academic standards will be intense--but difficult to accomplish, at least in those institutions hard-pressed to enroll students with qualifications comparable to students of years past, when enrollments were not so precipitous. Many postsecondary institutions will strive mightily to meet the needs of the new, less well-prepared students, substantial numbers of whom are simply not ready to enter the mainstream curricula of the institutions. In the

past, less patience might have been exhibited with such students. In the future, patience will spring eternal or standards will bend.

The dual pressures on colleges of less money and less able students will eventually filter down to the secondary schools, where greater demands will surface to improve the quality of high school graduates. The public, represented by vocal legislators, will not look fondly on the double financial jeopardy visited upon them in the replication by the colleges of high school curricula. Collectively, these pressures will translate into a need for better assessment and instruction in the secondary schools, both aimed at upgrading the skills of students whose developed abilities are at best marginally adequate to support their college aspirations.

Regardless of how the scenario finally unfolds, a need will continue to exist, both at secondary and postsecondary institutions, for testing instruments that provide teachers the means of identifying and evaluating students' levels of educational development, and to create instructional and learning environments in which they can function successfully.

For those involved in educational measurement, the challenge is clear, and not too different from what it has been for many years. Develop instruments that tell teachers what a student does and does not know, or can and cannot do, and, if possible, shed "diagnostic" light on the nature of the student's specific weaknesses; that is, why he cannot do that which he cannot do.

Unfortunately, success in developing such tests will not be sufficient. Even if such measures are developed, they are not likely to affect large numbers of students because our schools cannot easily incorporate such information into the learning environments.

Indeed, the development and delivery of tests that provide adequate diagnostic feedback for individualized interpretations and interventions--a

frequent almost whimsical theme in the popular educational literature--would likely not be greeted with much enthusiasm by many educators. By and large, such testing would be seen as taking too long, and complicating the instructional process too much, to meet with widespread acceptance. And, to a certain extent, this would be a fair and accurate assessment of the situation, especially if such tests continue to be developed as adjuncts to the school curricula.

Some support for this viewpoint already exists in much of the minimum competency testing now in place in this country, where practical concerns such as the balance between instruction and testing time and the tedium of lengthy testing sessions come into play. Most critical is the fact that, at present, the schools frequently have no truly effective means of acting on the information that diagnostic tests provide, because such testing typically is an add-on to, rather than an integral part of, the instructional process.

In my opinion, there is probably very little justification for measurement experts to invest much time and effort on developing tests with greater diagnostic power than some of the tests already available. Their time would be better spent in efforts to make more effective use of extant measurement tools, and to integrate available measures more directly into the instructional process. This, of course, would require that more educators be trained in proper use of measurement and evaluation instruments and techniques. This, in and of itself, would be no small accomplishment.

I will give some quarter on the pessimistic view point stated above in that I believe the potential exists, and will be realized in the next decade, for greater use of computers and other technological innovations for integrating testing with instruction. Such technology will

significantly affect our ability to derive and use diagnostic data more effectively.

Educational assessment has another important role to play during the next decade. As enrollments continue to decline in both secondary and postsecondary institutions, there are alternatives to catastrophic retrenchment in educational programs. One such alternative acknowledges the large number of students who drop out of our educational systems each year, and seeks to identify ways of serving these students better. Some evidence exists that students drop out whenever schooling, be it secondary or postsecondary, ceases to be a major priority in their lives; that is, when other alternatives become more important or attractive than their educational experiences.

At the postsecondary level, many schools will rise or fall in the next few years based upon their success or failure in maintaining enrollments at adequate levels. Related to enrollments, Astin has noted that "uncertainty about what to study is the most frequent reason talented students give for dropping out of college." Moreover, data indicate that students entering college without a declared major are far more apt to drop out of school than are those who are committed to a major from the first semester on.

While it is reasonable that some students choose not to select a major prior to, or upon entrance to, college, it is very likely that far more students would be better served if they were provided assistance that helped them to settle on a major, or at least to narrow down their options. As noted previously, far too little attention is given by both high schools and colleges to career and educational planning for students. With more effective services in this domain, an important factor in the dropout problem would be addressed. Assessment programs comprised of ability and interest measures, and other data sources pertinent to educational and

career decision making, will be an important ingredient in future secondary and postsecondary education if we choose to stop and listen to what students say they need, and to consider how colleges can be more effective in meeting that need.

Another reason that students do not succeed in school, and thus drop out, pertains to the goodness of fit between instruction and the students' level of readiness for that instruction. After years of optimistic projections about the potential of individualized instruction and the use of "new" educational technologies for helping schools to accommodate individualization of education, precious little real progress has been made. Similarly, research efforts directed at identifying and responding differentially to alternative cognitive and/or learning styles among individuals, has not progressed to a point where it offers any immediate or short-term hope of payoff to the masses of students who move through our educational systems. More effort and resources need to be committed to this effort and I predict that they will be in the coming years.

The Public

As the national opinion polls indicate, the public at large has strong, if inconsistent, views about the status of education in this country. Whether expressed by public interest groups, legislatures, or the press, one theme is recurrent throughout--a deep and abiding concern for the quality of education. No doubt it is this concern that has led many states to enact legislation requiring testing programs for monitoring students' progress in achieving certain prescribed proficiencies. There is little reason to believe that interest in such testing will diminish in the years immediately ahead.

The growth of "minimum competency" testing for students has also

spilled over to those who would teach. Indeed, many states have adopted, or are considering adopting, stringent standards for admission to, and exit from, teacher education programs. This concern for raising standards for would-be teachers has merit, as indeed it would for any profession.

Each year, ACT develops college student profiles based on various norms for students taking the ACT Assessment. These profiles are, of course, based on students who are presumed to be college-bound. Of the many profiles that can be developed using these data, one has some utility in crudely describing the intellectual capabilities of future teachers relative to those of other vocations/professions. Specifically, ACT routinely asks each student writing the Assessment to indicate his/her planned choice of college major. A total of 19 different categories of majors are identified, of which education is one.

For those students who enrolled as college freshmen in 1979-80 (and took the ACT Assessment a year or two before), slightly under ten percent indicated that they planned to major in education. As the data in Table 2 indicate, this group ranked 17th out of 19 on the ACT Composite, and 14th out of 19 in terms of high school grade average. For the individual subject areas measured, these same students fared even worse in rank order in the ACT measures of mathematics and natural sciences, but slightly better in English.

These data should not be viewed as precise indicators of the academic capabilities of the pool of teachers who will enter the profession in the mid 1980s. However, they do suggest that persons training to become teachers are likely to be far less capable academically, on the average, than those training for other professions/vocations. Such data lend credence to the public concern that the nation's most capable people resources are not being applied to the education of the nation's youth.

It is hardly a surprise, of course, that education draws fewer of the students who are highly capable academically relative to the other fields. Teaching continues to pay less than most other professions with which it is compared. It therefore attracts fewer of the highly capable students who have more financially rewarding career options available to them. Test data of the type now available support the need for upgrading the teaching profession.

In very recent days, a number of states have moved to raise the standards required of students who would enter teacher education programs. Many of these states have also imposed requirements for graduates of these programs as a condition of certification and eligibility to teach in the state. Nearly all of these requirements, both at entrance and exit, involve the use of tests. Considerable litigation, or the threat thereof, has followed, largely due to the differential effects of such standards on various subgroups of the affected populations. Measurement professionals will face many challenges in the years ahead related to society's effort to reconcile its belief in standards with its commitment to equity.

With the reservation that it is very difficult to accurately define the term "the public," and thus the public's viewpoint on any topic, it is worthy of noting here that at least one segment of the public, a very vocal one at that, has in recent years, expressed its chagrin with testing used in college admissions. Legislation affecting the use of such tests has been enacted in two states, and considered and subsequently rejected in a great many more. Ostensibly, such legislation has been aimed at opening up standardized testing to greater scrutiny. It is more likely that the driving force for the legislation has been a disaffection with the manner in which existing selection systems, especially as they apply to highly

selective undergraduate and professional school admissions, apportion their openings.

The legislation enacted to date, and the debate surrounding it, has led to some worthwhile improvements in testing practices. However, it has not visibly altered the manner in which admissions decisions are made, nor is it likely to do so. The hope of some persons that test legislation will eventually lead to increased access for some individuals, or groups of individuals, to postsecondary education, is misplaced. The legislation will result neither in improvements in the competence of individuals who have been poorly prepared for postsecondary education nor in improvements in the instructional programs that such individuals experience.

To the extent that dissatisfaction with selective college admissions persists, criticism of the tools used to abet that process will continue. A continuing challenge to measurement professionals will be to increase public understanding of the fundamental problems confronted when difficult selection decisions must be made because optimal educational and socio-economic opportunities did not prevail throughout the lifetime of all of the persons involved. Although we can and should strive to identify better assessment tools for facilitating such decisions, a potentially more productive alternative would be to invest some of our resources in using more effectively the test data we already have available to us (through the various standardized testing programs in our schools).

The Role of New Technologies in Educational Assessment

In addition to doing their best to satisfy the future needs and wants of students, educators and the public, professionals in the educational measurement community have an obligation to strive for improvements in their field. As a profession, we can and should do more to expand our capabilities for developing more direct measures of the skills and competencies that are important, or perceived to be important, outcomes of education. With the advent of new technologies, and the promise of their availability at affordable prices, new horizons exist for increasing the quality and utility of testing. Computer adaptive testing is within our reach, and with it the ability to combine testing results more powerfully with planned instruction and/or remedial interventions.

The mass presence of the microcomputer, and various video and telecommunication devices will substantially increase our access to new item modalities and delivery procedures and consequently, to more sophisticated and relevant assessment.

A troublesome and frustrating problem long acknowledged by the publishers of large scale testing programs, and a focal point for criticism in the recent legislative debates on testing, has been the misuse of test results. Despite the best efforts of the publishers and counselors to disseminate materials fostering and facilitating proper uses of test data, the ever changing population of test takers and test users, many of whom are not moved to develop the necessary understandings for the correct interpretation and uses of test data, contributes to the difficulty in overcoming this serious problem. Here again, new technologies accompanied by an understanding of both the power and the limitations of test data, offer a means of individualized and interactive interpretation of them

which should reduce the incidence of misinterpretations. I believe that we will see extensive applications of technology in this direction in the next few years.

Summary

In summary, I believe that educational assessment with all its faults, has an important role to play in education in the next decade. It behooves us to examine the functions that it can serve best. The greatest potential for testing can be seen in those areas where it helps people, be they students, teachers, principals, or other parties to the educational process, to make more informed decisions on issues that matter to them. We have lots of room as professionals in testing and education for gainful effort to this end.

Table 1

Entering Freshmen Needs for Special Assistance

Making Educational and Vocational Decisions	44%
Improved Mathematical Skills	40%
Improved Study Skills	37%
Improved Writing Skills	27%

Table 2

GROUP DATA AND RANK ON ACT TEST SCORES

AND HIGH SCHOOL GPA OF STUDENTS PLANNING

TO MAJOR IN EDUCATION

	ACT TEST SCORES					
	Eng	Math	Soc Studies	Nat'l Sci	Comp	High School GPA
Mean	17.4	15.5	16.0	19.5	17.2	2.95
RANK (out of 19)	16th	18th	17th	18th	17th	14th